B6200-2

World Financial Markets

JPMorgan

1989 issue 4
November 10

Japan: the world's leading foreign investor, 1
Foreign securities investments, 3
Currency and market preferences, 6
Role of the banks, 8
Direct investment accelerates, 9
Official development assistance, 10
Concluding observations, 12
Statistical appendix, 13

Table 1

Japan's external balance sheet

billions of dollars, at end of year

	1985	*1986*	*1987*	*1988*
Total assets	438	727	1072	1469
Long-term	301	476	646	833
Private sector	264	425	565	728
Securities	146	258	340	427
Direct investment	44	58	77	111
Short-term	136	251	425	637
Banks	100	195	320	502
Total liabilities	308	547	831	1178
Long-term	122	192	236	312
Private sector	92	152	179	268
Securities	85	144	166	255
Short-term	186	355	595	866
Banks	177	322	530	765
Net assets	130	180	241	292
Private sector	104	139	146	148
Long-term	173	273	386	460
Short-term	—68	—134	—240	—312
Banks	—61	—127	—210	—263
Government sector	25	42	94	144
Reserves	28	43	82	98

Japan: the world's leading foreign investor

Japan has become the world's largest source of cross-border investment, and is likely to remain so for some time. By the end of 1988, its residents had accumulated net external assets of more than $290 billion, up from less than $30 billion at the start of the 1980s (see Table 1). Japan's net foreign assets exceed those of any other country in absolute terms, although on a per capita basis they still lag those of the United Kingdom, Germany, the Netherlands, and a few low-population countries on the Arabian Peninsula.

Underlying Japan's rapid accumulation of overseas assets has been the emergence of a large excess of domestic savings over domestic investment and consequent current account surpluses, which amounted to nearly $360 billion during 1980-88. This year the surplus should narrow to about $66 billion, compared with a peak of $87 billion in 1987 (see Table 2). This could boost Japan's net external assets to more than $350 billion by the end of this year, excluding possible valuation changes.*

Japan's role as an international investor and its influence in foreign markets are much greater than implied by growth in the nation's net external assets. In addition to residents investing their excess domestic savings abroad and accumulating net foreign assets, financial institutions in Japan, especially banks, have become major international intermediaries, taking funds from nonresidents, chiefly in the interbank market, and relending and investing them overseas, or financing the acquisition of foreign assets by other Japanese residents. On a smaller scale, Japanese nonfinancial entities engage in sizable borrowing abroad, mainly through the issuance of external bonds and other marketable instruments, and use part of the proceeds to finance their direct and portfolio invest-

*Changes in Japan's external balance sheet correspond only loosely to balance of payments inflows and outflows because the amounts of outstanding foreign assets and liabilities undergo major valuation changes: for example, depreciation of the dollar against the yen and other major currencies raises the dollar value of Japan's liabilities more than that of its assets because the amount of liabilities denominated in yen and other nondollar currencies exceeds the volume of assets denominated in these currencies. Also, the sharp rise in Japanese stock prices caused a $36 billion increase in the value of foreign holdings of Japanese equities (which are Japanese liabilities) in 1988 alone.

Table 2

Japan's trade and current account surpluses

billions of dollars

	*Trade surplus**		*Current account surplus*	
	Total	*With United States*	*Total*	*With United States*
1985	46	39	49	42
1986	83	51	86	54
1987	80	52	87	57
1988	78	48	80	51
*1989***	71	46	66	50
*1990***	73	48	66	52

*Customs clearance basis.
**Projected.

ment overseas.

This combination of international intermediation and deployment of excess domestic savings led to the extraordinary rise in Japan's gross foreign assets to nearly $1.5 trillion at the end of 1988 from only $135 billion at the beginning of the 1980s. Close to half these gross assets were held by banks. Reflecting its international intermediary role, Japan's gross foreign liabilities reached almost $1.2 billion at the end of last year, two-thirds of which were on the balance sheets of Japanese banks.

The surge in Japanese foreign investment followed enactment of the landmark 1980 foreign exchange law which for the first time allowed Japanese investors to acquire foreign assets relatively freely. Interacting with macroeconomic shifts that upset the savings-investment balance in both Japan and the United States, the newly unleashed Japanese interest in investing overseas was one of the factors that strengthened the dollar in the early 1980s and contributed to the dramatic rise in Japan's current account surplus. Japanese private-sector annual net purchases of foreign securities, mostly bonds and a large portion of those dollar-denominated, rose from less than $19 billion to more than $100 billion in 1986 (see Table 3). Net additions to Japanese private-sector portfolios of long-term foreign securities moderated to an average of $87 billion during the next two years. At the same time, Japanese direct investment abroad took off, reaching $34 billion in 1988, up from an average of less than $5 billion annually in the first half of the 1980s. By the end of 1988, the private sector's gross long-term assets were valued at about $730 billion, nearly three-fifths of which consisted of foreign securities. Another 15%, or about $110 billion, represented the book value of direct investment abroad. The government sector held more than $200 billion of foreign assets at the end of last year, split about evenly between reserves and other assets, mostly subscriptions to international institutions and long-term loans.

Japan's foreign assets should continue to grow rapidly for several years to come. The macroeconomic underpinnings of the nation's large current account surpluses are unlikely to change quickly. The pattern of long-term capital flows so far this year suggests the trends evident in the past few years are continuing, with net purchases of foreign securities running at an annual rate of close to $100 billion in the first three quarters of 1989, and the rate of Japanese direct investment flows abroad topping $40 billion. Although some major Japanese financial institutions may not continue to diversify their portfolios internationally as rapidly as they did earlier in the 1980s, they could still be very

Table 3

*Japan's capital account**

billions of dollars

	1985	*1986*	*1987*	*1988*	*1989***
Current account surplus	49	86	87	80	60
Long-term capital account	—65	—131	—137	—131	—76
Japanese investment abroad	—82	—132	—133	—150	—170
Securities	—60	—102	—88	—87	—100
Bonds	—59	—95	—71	—84	—87
Equities	—1	—7	—17	—3	—14
Direct investment	—6	—14	—20	—34	—41
Loans	—10	—9	—16	—15	—19
Foreign investment in Japan	17	1	—4	19	94
Short-term capital account	12	58	93	65	23
Banks	13	60	69	45	—10
Other	—1	—2	24	20	33
Official reserves	0	—16	—39	—16	15

*Minus sign denotes net outflow of capital (an increase in net foreign assets).
**January-September 1989 at an annual rate.

Table 4

Total assets and foreign securities holdings of Japanese financial institutions

December 31, 1988

	Trillions of yen	*Billions of dollars*
Banks		
Total assets	582.05	4623.10
Foreign securities	11.97	95.07
Life insurance companies		
Total assets	92.46	734.36
Foreign securities	13.09	103.94
Postal life insurance		
Total assets	39.93	317.18
Foreign securities	2.24	17.79
Casualty insurance companies		
Total assets	19.64	155.96
Foreign securities	2.05	16.25
Securities investment trust companies		
Total assets	52.71	418.67
Foreign securities	4.78	38.00
Other trust accounts		
Total assets	114.39	908.55
Foreign securities	8.17	64.88
Norinchukin Bank		
Total assets	27.62	219.37
Foreign securities	2.03	16.14

large net buyers of foreign assets since their total assets may grow as much as 10%-20% a year. The dollar share of total portfolios may ebb, but will still leave room for a substantial increase in Japan's dollar-denominated holdings over coming years. There is, however, some risk that current yen weakness could lead to larger Japanese trade surpluses in the future. These surpluses could exceed private-sector investors' appetite for new overseas assets, particularly if resolution of domestic political uncertainties, in combination with strong domestic economic fundamentals, leads to a shift in sentiment toward yen assets. This could set the stage for another period of yen appreciation against the dollar.

Foreign securities investments

Foreign securities purchases by Japanese investors are credited with greatly influencing the international bond market as well as various national markets, including that for U.S. Treasury securities. Japanese net purchases have been concentrated in interest-bearing securities, with equities accounting for only about 15% of total net acquisitions of foreign securities during the past five years. Last year, following the October 1987 stock market crash, Japanese residents made $87 billion of net purchases, only $3 billion of which consisted of equities. However, in the first three quarters of this year net new investment in foreign equities rose to $14 billion, out of total foreign securities purchases of $100 billion, both at annual rates.

Japan's main securities investors are banks and other major financial institutions. Their acquisitions of foreign securities typically account for about 60% of total Japanese net purchases. The remainder are attributed to a residual category that includes nonfinancial corporations and individuals, on which detailed data are not available.

Banks held $95 billion in overseas securities at the end of 1988 (see Table 4). Their net purchases slowed to only $3.5 billion last year, but in the first eight months of 1989 banks added to their holdings at an annual rate of more than $16 billion (see Table 5). However, foreign securities account for only 2% of the banks' total assets (see Table 6). Banks in Japan operate under restrictions that limit their overall net exposure in foreign currencies. Thus, on the margin, their purchases of nonyen bonds must be financed with nonyen liabilities, which makes interest rate spreads and the shape of yield curves key determinants of their securities investment decisions. The flat-to-inverse yield curves prevailing in a number of overseas markets over much of 1988 and 1989 reduced the attractiveness to banks of purchasing fixed-rate foreign currency bonds

Table 5

Japanese net purchases of foreign securities by type of investor

*annual flows, in billions of dollars**

	1985	*1986*	*1987*	*1988*	*1989***
Banks (banking accounts)	13.8	15.0	7.8	3.5	16.6
Life insurance companies	3.9	15.0	21.0	21.4	24.5
Postal life insurance	1.6	3.1	3.5	2.1	1.6
Securities investment trust companies	3.3	13.5	1.6	5.0	0.1
Other trust accounts	8.5	16.3	11.5	2.3	11.7
Norinchukin Bank	2.4	4.0	—0.1	3.3	3.4
Other reporting financial institutions	2.8	3.4	2.4	6.0	10.2
Unidentified investors (residual)	23.5	31.7	40.2	43.3	31.9
All residents	59.8	102.0	87.9	86.9	100.0

*Yen flows converted at period average dollar-yen exchange rate.
**Annualized flows based on six to nine months of data, depending on investor.

Table 6

Foreign securities holdings of Japanese financial institutions

data are for year-end

	As percent of total securities holdings		As percent of total assets	
	1980	*1988*	*1980*	*1988*
Banks (banking accounts)	2	12	0	2
Life insurance companies	9	31	3	14
Postal life insurance	0	11	0	6
Securities investment trust companies	2	14	2	9
Other trust accounts	2	15	0	7

funded by short-term foreign currency borrowing. More recently, however, the possibility of an economic slowdown and lower interest rates in the United States has enticed banks with the prospect of capital gains despite the inverted yield curve.

Most other institutional investors face much less binding constraints. The main nonbank institutional investors (life insurers, casualty insurers, the government-owned postal life insurance system, investment trusts, and other trust accounts including pension trusts) held $240 billion of foreign securities at the end of 1988. Relative returns and liquidity are the two dominant investment criteria, but with differing emphasis. Some players focus mainly on current yields, while others stress total returns, including foreign exchange and other capital gains or losses.

In 1988 life insurance companies added a record $21.4 billion in foreign securities, and their net purchases are running at a nearly $25 billion pace this year. These have come to account for 31% of their securities portfolios and 14% of total assets, far more than at most institutions. Adding foreign loans, real estate, and bank deposits takes their total foreign holdings somewhat closer to the 30% regulatory ceilings on foreign and foreign-currency assets as a share of life insurers' total portfolios (see Table 7).

Life insurers were among the main investors to benefit from the 1980 changes to Japan's foreign exchange laws. Their interest in foreign securities was enhanced by the rule limiting policy payouts to coupon and dividend payments, not capital gains. Japan's low inflation and accompanying low interest rates make it hard to obtain high current returns by investing in domestic yen credit markets, while most of the return on domestic equities comes in the form of capital appreciation, completely unavailable for direct policy payouts. However, if foreign currency securities offer a satisfactory total return, insurers can employ the higher coupons and dividend yields for policy payoffs. Capital gains realized on domestic equities can then be used to offset possible foreign exchange losses, which are settled in another part of a company's accounts. In fact, domestic bonds are so relatively unattractive that life insurers hold far more in foreign securities than they do in Japanese domestic government and corporate bonds. For over a year the government has been considering allowing insurers to include capital gains in policy payouts. This could reduce interest in the high-yielding foreign currencies — the U.S., Canadian, and Australian dollars, plus sterling — in which as much as 90% of the insurers' foreign currency bond portfolios are invested. Still, high-yielding instruments offer sizable compensation for the risks of an appreciating yen.

Life insurance companies, which already hold over $100 billion in foreign securities, will continue to invest more in such assets than any other category of institutional investor. They will continue to have high inflows of funds and need high returns to meet contractual obligations and compete with other asset managers. In addition to premium income on insurance policies, the life insurance companies will receive large inflows from corporate pension funds. Inflows will also come from public pension funds now that the Trust Fund

Table 7

*Key restrictions on foreign investments of Japanese investors**

	Percent of total assets	Remarks
Life insurance companies		
Foreign securities	30	A
Assets denominated in foreign currencies	30	B
*Real estate***	20	—
Loans to foreigners	10	—
Futures and options	—	C
Casualty insurance companies		
Foreign securities	30	A
Assets denominated in foreign currencies	30	B
*Real estate***	20	D
Loans to foreigners	10	
Futures and options	—	E
Postal life insurance		
Foreign securities	20	A,F
Pension trusts		
Assets denominated in foreign currencies	30	—
*Real estate***	20	—
Futures	—	G
Loan trusts	5	F
Tokkin	100	—
Money trusts (excluding tokkin)	5	F
Securities investment trusts		
Naigai funds		
Foreign securities	100	—
Futures	—	H
Other funds		
Foreign securities	50	—
Futures	—	H,J
Trust Fund Bureau		
Foreign bonds	10	K

*Some restrictions listed here are based on reports of administrative guidance.
**Domestic and foreign combined.

A Includes yen-denominated foreign securities.
B Includes deposits, CDs, CP, real estate, and sushi bonds (foreign-currency denominated issues by Japanese corporations).
C Hedging only; potential changes to allow unhedged positions.
D Restricted to 10% of assets if equity falls below certain standards.
E Hedging only.
F No equities.
G 50% or less of foreign currency assets.
H Sell contracts may not exceed face value of cash holdings.
J Combined cash and futures exposure to foreign securities cannot exceed 50% of total assets.
K Foreign governments and international organizations only.

Bureau of the Ministry of Finance and other public agencies are relinquishing control of part of the funds to private management. So even without raising the share of their portfolios placed overseas, life insurance companies could add $15-$20 billion annually to their foreign holdings over the next few years. And, if they were to raise the portion of their total assets invested abroad by a mere 1 percentage point, they would acquire an additional $7-$8 billion.

The postal life insurance system, a government institution known as Kanpo, became a heavy buyer of foreign securities during the mid-1980s, when the limit on its foreign currency bond holdings as a share of assets was raised to 10%. Yet, unlike the private insurers, its net purchases slowed noticeably during 1988 and 1989, leaving its foreign securities holdings at less than 6% of its total assets. Kanpo may have been influenced by earlier large capital losses stemming from yen appreciation. Though private insurers presumably experienced comparable losses in yen terms, Kanpo lacked offsetting capital gains from investments in the domestic stock market.

Securities investment trusts, which attracted attention in the spring of 1988 by making large purchases of dollar bonds when others were still nervous about the currency risk, face perhaps the lightest regulatory restrictions. One set of funds, called *naigai* funds because they can invest both at home and abroad, has no ceiling at all on foreign securities holdings, and therefore can move both sizably and speedily into foreign securities. Because these trusts are redeemable and designed for shorter horizons than those of life insurance policies and pension funds, their investments favor liquid instruments and maturities of up to five years or so — in other words, medium-term bonds and liquid equities. These trusts were major buyers of foreign securities, particularly dollar securities, earlier this year but more recently have been net sellers.

Trust accounts (other than investment trusts) slowed their net purchases of foreign securities in 1988 to only $2.3 billion, barely 15% of the $16.3 billion high set in 1986. They were, in fact, net sellers early this year. Pension trusts managed by trust banks have under one-sixth of their assets in foreign securities, plus some further fraction in foreign-currency deposits, well below a legal ceiling of 30%. Still, because their liabilities are largely yen-denominated, some pension accounts have laid a sizable bet on foreign assets. More important are loan trusts, the largest type of account managed by trust banks. Until last February, only 3% of loan-trust assets, along with those of certain money trusts, could be invested in foreign-currency bonds. The limit since has been raised to 5% of assets, adding over $6 billion to the trust banks' capacity for acquiring foreign securities in these accounts above and beyond what growth in total assets permits. Trust banks at first treated last spring's dollar strength as an opportunity to liquidate earlier holdings. However, they appear to have changed their view around May, with foreign bonds and stocks back in favor, particularly for pension accounts. In the four months ended in August, trust banks purchased around $9.5 billion in foreign securities for the

Chart 1

Japan: foreign securities purchases and the yen

various accounts they manage.

It is thought that trust banks, which at the end of 1988 had more than $900 billion in funds under management in various trust accounts, including some $65 billion in foreign securities, are likely to invest more heavily abroad than they have previously. They face an increasingly competitive environment as a consequence of deregulation and clients' desire for higher returns. In combination with total asset growth, currently running in excess of 15% per annum, this should keep trust accounts well up in the ranks of investors in foreign securities.

Two other major players — the central depositories for farm cooperatives (Norinchukin) and for shinkin banks (Zenshinren) — operate under rules similar to those for regular banks. Both institutions are relative newcomers to international investing. Each added over $2 billion to their foreign security holdings last year and have been sizable buyers so far in 1989.

The large net purchases of foreign securities by Japanese investors other than those reported by financial institutions — over $40 billion in each of the last two calendar years, and roughly $32 billion at an annual rate in the first nine months of 1989 — consist partly of acquisitions by individuals and nonfinancial corporations. Data covering the one thousand or so largest nonfinancial corporations in Japan, however, indicate they held only about $15 billion in foreign-currency bonds at the end of their latest fiscal year, despite their reputation for *zaitech* (financial engineering). The unidentified residual apparently also reflects differing asset classification and valuation practices as well as some underreporting by financial institutions.

Currency and market preferences

Currency fluctuations have been a major component of the overall returns realized by Japanese international portfolio investors, and probably will continue to be. The volume and pattern of Japanese net securities purchases abroad often appear to correlate closely with exchange rate expectations, particularly for the yen-dollar rate. Net purchases of foreign securities fell to relatively low levels in late 1987 and early 1988, when the yen's prospects seemed brightest against virtually all currencies, including the dollar, and the yen's later turnaround began with heavy foreign securities purchases between May and August 1988 (see Chart 1). Another slowdown in net buying in September last year appears to have contributed to the dollar's weakness at the time, but as sentiment toward the dollar grew more positive, particularly last spring, net purchases recovered. At times, the magnitude of the changes in Japanese investors' net securities purchases abroad in response to shifting exchange rate expectations seems to have been large enough to have been an important factor in the realization of those expectations.

Japanese investors also have shifted their preferences between the dollar and other currencies, as evidenced in the changing destinations of their securities investments over the last five years (see Table 8). However, even during the dollar's sharp depreciation from mid-1985 through early 1988, the United States consistently took the largest

Table 8

Geographic distribution of Japanese net purchases of foreign securities

as percent of total net purchases

	1985	1986	1987	1988	1st half 1989
United States	53	48	43	42	44
*Luxembourg**	21	24	30	29	32
United Kingdom	10	13	10	12	12
Germany	1	3	6	7	2
Canada	2	7	3	1	0
Australia	2	0	3	2	3
France	0	0	1	—0	3
*Others***	11	5	4	7	4

*Euromarket.
**Includes international institutions and unallocated.

share of Japan's overall foreign bond and equity investment. (The dominance of dollar-denominated purchases is even greater than evident from heavy investments in the United States since purchases in Luxembourg consist mainly of Eurodollar bonds, many of them convertible and warrant issues of Japanese companies.) This is not so surprising given the unrivaled breadth and depth of U.S. markets, especially for U.S. Treasury securities — key considerations given the scale of Japanese investment and the importance of liquidity for many investors, especially insurers mindful of the large withdrawals a major earthquake at home could require. These considerations suggest that foreign securities purchases by Japanese investors will continue to be concentrated in dollar-denominated instruments, even while these investors continue to participate in a widening range of markets.

High-yielding bond markets outside the United States have had particular appeal to Japanese investors. Since mid-1985, U.K. gilts and Canadian and Australian government bonds have yielded more than U.S. Treasuries, sometimes by a wide margin (see Chart 2). However, Japanese buying in these markets, especially the Canadian and Australian markets, is limited by their relatively small size; both exchange rates and bond prices in these markets are susceptible to significant moves when various Japanese investors simultaneously shift what would be small amounts of money for the U.S. Treasury market. Even so, these traditional high-yield markets should continue to attract Japanese investors over time.

Continental European bond markets have yet to attract much buying interest, apart from occasional forays into German bonds during bouts of dollar weakness. The small size and limited liquidity of most Continental markets are deterrents to large-scale Japanese investment, although ongoing liberalization and deregulation may gradually increase their attractiveness, as evidenced by increased purchases in France this year.

Japanese foreign equity portfolios are heavily weighted with U.S. shares. In some years, two-thirds of Japan's total net foreign equity purchases have gone into the U.S. market. U.K. equities also have attracted considerable ongoing buying interest, while net share purchases in other European stock markets have been relatively small. Equity transactions by Japanese investors in Luxembourg reflect mainly the exercise of conversion rights or the purchase of equity warrants connected with external bonds issued by Japanese corporations. However, growing awareness of increased European economic dynamism in anticipation of 1992 may lead to increased interest in European equities by Japanese investors. Japanese investor interest in the emerging

Chart 2

Yield spreads against United States

10-year government bonds, basis points

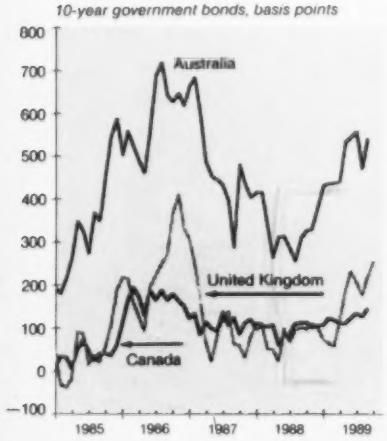
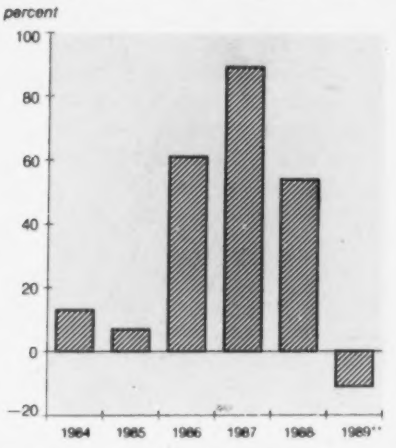


Chart 3

Foreign currency hedging proxy forJapanese portfolio investors*



*Estimated net short-term foreign-currency-denominated capital inflows as percent of estimated Japanese net long-term foreign-currency-denominated capital outflows for trade credits, loans, and security purchases.

**First half.

Asian markets is also likely to grow. The Singapore and Hong Kong stock markets attracted Japanese buying last year, and promise is seen in others such as South Korea, Taiwan, and Thailand. Currently, however, entry into many of these emerging markets by foreign investors is restricted and liquidity is limited.

Assessing the impact of Japanese net purchases of foreign securities on exchange rates cannot be based merely on the direction and currency composition of reported capital flows and related balance sheet changes. Portfolio investors hedge some of their currency risks, and decisions regarding the extent of such hedging can affect exchange rates. The ratio of net short-term, foreign-currency-denominated inflows to net long-term, foreign-currency-denominated outflows of the Japanese private sector provides a very rough proxy of changes in currency hedging by portfolio investors. As shown in Chart 3, this ratio was low in 1984 and 1985 as the dollar neared its peak, then rose sharply in 1986 and 1987 as the dollar sank; it fell again in 1988 when the dollar recovered, and then plummeted in the first half of 1989. As a measure of hedging, however, this ratio is seriously flawed now that Japanese investors have become active participants in the rapidly growing markets for foreign exchange options, forwards, and currency swaps; many hedging decisions are, no doubt, implemented off balance sheet and thus are not captured in the capital flow data.

Role of the banks

Japan's large current account surpluses and rapid buildup in net external assets have coincided with a period of growing Japanese prominence in international banking. Japanese banks' international assets (cross-border claims and local foreign-currency claims booked in offices in Japan and overseas) rose nearly fourfold, to $1,756 billion, in the five years ended in 1988. By that time they represented 38% of the total international assets of all banks based in countries that report to the Bank for International Settlements, up from 20% five years earlier.

Nearly two-thirds of Japanese banks' international business is booked in offices located in Japan, and much of it consists of cross-border activities reflected in the country's capital flows. Surprisingly, banks in Japan have not been a major channel for the country's overall net capital outflows. The large increase in their foreign assets booked in Japan, from $195 billion at end-1985 to $773 billion at end-1988, was fully matched by a run-up in their liabilities to foreigners, from $179 billion to $772 billion.* Moreover, if changes in both outstanding foreign assets and liabilities are adjusted for the estimated effects of exchange rate changes, the growth of banks' liabilities to foreigners exceeded that of their claims on foreigners by nearly $70 billion over this three-year period. Thus, Japanese banks have been net takers of funds from abroad, which they re-lent to nonbank residents.

Japanese banks, as noted earlier, have been among the

*A sizable portion of this increase in both external assets and liabilities reflects the establishment in late 1986 and subsequent rapid growth of the Japan Offshore Market (JOM) similar to International Banking Facilities (IBFs) in the United States. At the end of 1988, the JOM totaled about $330 billion, very close to the size of IBFs.

Table 9

Japanese overseas direct investment outflows

billions of dollars, fiscal years

	Annual			Cumulative total*
	1986	1987	1988	
Total	22.3	33.4	47.0	186.4
By region				
United States	10.2	14.7	21.7	71.9
Asia	2.3	4.9	5.6	32.2
Latin America	4.7	4.8	6.4	31.6
Excluding banking centers	0.5	0.3	0.7	9.0
Europe	3.5	6.6	9.1	30.2
Middle East	0.0	0.1	0.3	3.4
By sector				
Manufacturing	3.8	7.8	13.8	49.8
Finance	7.2	10.7	13.1	41.9
Real estate	4.0	5.4	8.6	20.6

*Fiscal years 1951-88.

major financial institutions investing in foreign securities, although the pace of their net purchases appears to have slackened somewhat in 1988 and early 1989. In part, this may reflect the flattening or inversion of yield curves which reduces the attractiveness of acquiring medium- and long-term bonds funded by short-term liabilities. Net new cross-border term lending by banks from their offices in Japan has been fairly modest, judged by the roughly $15 billion annual net long-term lending to foreigners by banks, insurance companies, and government financial institutions combined. Japanese banks, like those in other countries, have sharply reduced their new lending to LDCs, especially those experiencing debt-servicing difficulties. They do appear to have continued to expand their loans to developing countries in Asia and to industrial-country borrowers, although a large portion of the loans to the latter are booked in their offices outside Japan and thus do not affect Japan's capital flows. Japanese regulators recently expressed concern about the degree of involvement in LBO financing. The new BIS guidelines on risk-based capital also may have slowed the expansion of Japanese banks' investing and lending abroad.

Direct investment accelerates

Just when new purchases of foreign securities were peaking in 1986, Japanese capital outflows in the form of direct investments abroad took off. Such outflows accelerated from less than $7 billion in 1985 to more than $34 billion last year. And, in the first three quarters of 1989, Japanese overseas direct investment hit $41 billion at an annual rate.

Several factors explain this rapid increase. One is the escalation of trade friction with the United States and other industrial countries, which has caused Japanese manufacturers to step up investment abroad to circumvent actual or threatened trade restrictions. In addition, Japanese direct investment abroad has been motivated by changes in relative production costs that accompanied the sharp appreciation of the yen after the 1985 Plaza Accord. Once Japanese producers became convinced that the yen's appreciation was not a temporary phenomenon, they moved rapidly to expand production facilities in lower-cost locations, especially but not exclusively in Southeast Asia. Companies operating in labor-intensive industries and those with standardized technology and assembly-line manufacturing were particularly active. The combination of yen appreciation and the escalation of land prices in Japan also led Japanese real estate investors to seek out higher current returns on foreign properties, particularly in the United States. Recently, anticipation of possible trade and other restraints in Europe after the unification of the internal EC markets has caused Japanese companies, in both manufacturing and finance, to establish their presence safely inside in time for 1992.

Driven by the combination of economic and political factors, manufacturing headed up Japan's overseas direct investment activity in 1988, though it still accounted for less than 30% of last year's total direct investment outflows, and only about 27% of the outstanding book value of cumulative flows since 1951 (see Table 9). Nearly as important in

Table 10

Sectoral composition of Japanese overseas direct investment

cumulative flows for fiscal years 1951-88
billions of dollars

	Total	North America	Asia	Europe
Total	186.4	75.1	32.2	30.2
Manufacturing	49.8	23.9	12.4	4.9
Chemicals	6.5	2.3	1.8	0.6
Metals	7.7	2.6	2.3	0.3
Machinery and equipment				
General	4.9	2.6	1.0	0.6
Electric	10.2	6.0	2.4	1.3
Transport	7.0	3.0	1.1	0.9
Mining	13.9	1.6	6.9	1.1
Commerce	20.0	11.7	1.9	4.0
Finance	41.9	12.4	2.5	14.9
Real estate	20.6	15.8	1.2	1.4

terms of both 1988 flows and cumulative outstandings was finance, while new real estate investments valued at $8.6 billion brought outstandings in the category to more than $20 billion at the end of fiscal 1988. Regionally, close to 45% of total Japanese direct investment flows has gone into the United States in recent years, with manufacturing followed closely by real estate in importance (see Table 10). Europe has become the second most important regional destination of Japanese direct investment flows in the past two years, with the financial industry dominating. Annual direct investment flows to Asia continue to be largely concentrated in the manufacturing sector.

Direct investment abroad undoubtedly will continue to grow at a strong pace. The drive by Japanese manufacturing firms and financial institutions to increase operations abroad will continue to be influenced by fears of increased protectionism in the United States and Europe; by relocations and expansions of productive capacity in lower-cost areas, particularly in other Asian countries; by expectations of potential market growth, especially in the EC and Asia; and by relatively attractive current returns on foreign real estate investments, particularly in the United States but also in Europe. Japanese direct investment flows to the United States will continue to be larger than to any other country.

The rapid growth of this investment is raising political concerns in some host countries. Yet, in the United States, for example, the cumulative book value of Japanese direct investment at the end of 1988 was only one-fourth that of European companies and only double that of Canadian companies. Moreover, Japanese multinational manufacturers still lag far behind their U.S. and German counterparts in terms of the share of their total production carried out overseas — roughly 5% versus more than 20% and 17%, respectively. In real estate, however, Japanese investors are not lagging. Some of the political concerns could best be countered by changes in Japanese attitudes and policies to let U.S. and other foreign firms make the kinds of direct investments in Japan that they already have in other nations.

Official development assistance

Large current account surpluses, in combination with its growing economic power, have generated rising calls, from within and abroad, for Japan to step up its assistance to developing countries. Official policy has come to acknowledge that Japan's role in resolving the problems of Third World debt and development must be commensurate with the size of its economy. Last July Japan outlined plans for recycling the equivalent of an additional $35 billion in financial assistance to developing countries over the period ending March 1992. This $35 billion pledge supplements earlier recycling plans announced in 1986 and 1987; these totaled $30 billion and are to be completed in the current fiscal year. Over 95% of the latter sum has been committed, although only about half had actually been disbursed by mid-1989. The $65 billion total is intended to be largely additional to Japan's ongoing official development assistance (ODA) programs.

Table 11

Official development assistance

by major industrial countries

	Billions of dollars		Percent of GNP
	1986	*1987*	*1987*
Japan	5.6	7.5	0.31
United States	9.6	8.9	0.20
*EC members**	16.1	19.1	0.50
*Total DAC***	36.7	41.5	0.35

*Excluding Greece, Portugal, and Spain.
**Members of OECD's Development Assistance Committee.

Table 12

Japan's bilateral official development assistance

net disbursements in 1988

	Millions of dollars	Percent of total
Asia	4039	62.8
Indonesia	985	15.3
China	671	10.5
Philippines	535	8.3
Thailand	361	5.6
Bangladesh	342	5.3
Pakistan	302	4.7
India	173	2.8
Africa	884	13.8
Middle East	584	9.1
Latin America	399	6.2
Other	522	8.1
Total	6426	100.0
Grants	3514	54.7
Loans	2912	45.3

The latest $35 billion recycling plan, like the earlier ones, envisages a mix of government- and private-sector effort. Some $10 billion is earmarked for support of the Brady Plan, $8 billion to come in the form of Japanese Export-Import Bank (JEXIM) loans, and $2 billion in Overseas Economic Cooperation Fund (OECF) credits. Commitments already have been made to Mexico and the Philippines in conjunction with their debt reduction plans. In addition to the $8 billion of credits to heavily indebted LDCs, in the forms of parallel financing with the IMF and cofinancing with the World Bank and other multilateral development banks, JEXIM is slated to lend another $5.5 billion to other developing countries; like much of Japan's previous aid flows, these credits probably will be heavily directed toward Asian countries. JEXIM credits will be at interest rates close to commercial levels, mostly yen-denominated, and all untied. The OECF, the government's soft loan agency, is to provide $7 billion in concessional loans, including the $2 billion in support of the Brady Plan. These loans will also be untied. The remaining $14 billion of the latest recycling package consists of an unspecified mix of government contributions to the IMF, World Bank, and other multilateral development institutions, together with private-sector investments. The latter will include purchases of yen-denominated bonds issued by multilateral institutions and developing countries, commercial bank credits — some in parallel with JEXIM loans — and direct investments by Japanese nonfinancial companies.

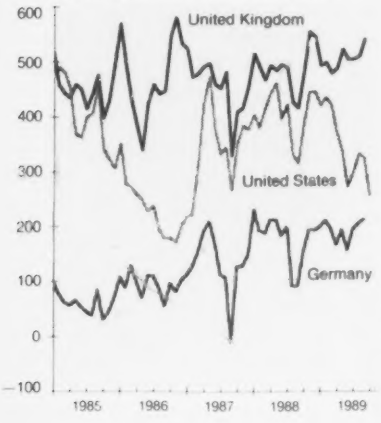
Japan's official assistance to developing countries has risen substantially in recent years and is targeted to increase further in the period ahead. Japan is now second only to the United States in terms of the dollar value of its disbursements for 1987, the last year with complete data for all members of the OECD's Development Assistance Committee (DAC). The yen's appreciation explains only part of Japan's increasing prominence. As a share of GNP, Japan's assistance is approaching the average for DAC countries, and clearly outranks the U.S. effort (see Table 11). The absolute amount of its assistance grew at a double-digit pace in yen terms in 1987, and has been spared the stringency affecting most other portions of the government budget.

Despite this record, Japan's aid efforts are sometimes met with a degree of skepticism that centers around doubts whether commitments are matched by actual disbursements, suspicions of double counting when announcing various aid initiatives, and beliefs that commercial motivations dominate. There is no question that in earlier years some Japanese officials saw aid as merely another method of promoting Japan's commercial interests. However, in recent years Japan has channeled a significant share of its ODA through multilateral channels, which weakens the direct tie to Japan's commercial interests. Moreover, many bilateral loans and grants currently being made are untied. Admittedly, Japan's bilateral ODA remains heavily concentrated in Asia (see Table 12), a region that is a major market for its exports, the recipient of sizable Japanese direct investment flows, and a key source of raw material imports. Of course strategic and humanitarian considerations are important factors

Chart 4

Yield spreads against Japan

10-year government bonds, basis points



in this region as well as commercial interests.

Concluding observations

Barring some unexpected development, Japanese foreign investment flows — securities purchases, direct investments, and loans — are likely to remain very large for several years to come. They may not grow as rapidly as in the past; indeed, the rate of increase in Japanese long-term capital outflows has already slowed considerably from an average annual rise of about 35% during 1980-86, to less than 9% per annum since then. However, even if maintained only at this year's annual rate of about $170 billion, Japanese long-term investment abroad will have significant influence on world financial markets.

In terms of the principal channels for foreign investment, Japanese financial institutions probably will continue to make large net purchases of foreign securities. Their total assets are growing by 10%-20% annually, depending on the type of institution. This growth alone is enough to generate sizable new foreign investment even without the share of assets devoted to foreign instruments increasing. In practice, the foreign share may continue to rise, albeit very gradually. Existing regulations governing the share of total assets in foreign investment are not binding in most cases, and should they become a constraint, past experience suggests that liberalization is a distinct possibility. The motivations for further international portfolio diversification still exist. Interest rate differentials have narrowed, but they still favor foreign bonds, an important consideration for yield-sensitive Japanese investors (see Chart 4). Moreover, the continued development of hedging techniques and increasing familiarity with them could make Japanese investors more comfortable with managing overseas interest rate and currency risks. Another consideration is possible shortages in the supply of new domestic interest-bearing securities, especially if the government stops using so-called deficit financing bonds as planned and if relatively stringent conditions for issuing debt securities domestically continue to limit the supply of domestic corporate bonds.

The shift in the pattern of Japanese long-term capital outflows that has been occurring recently seems likely to continue. In terms of net purchases of foreign securities, bonds will continue to dominate, but the portion going into equities could increase. The share of foreign equities in Japanese portfolios is low relative to many other countries. Japanese direct investment overseas probably will continue to grow at a more rapid rate than foreign portfolio investment. The economic and political incentives are strong. And, as with Japanese portfolio investment in foreign equities, Japanese direct investors have considerable catching up to do before they approach a relative scale of foreign direct investment similar to that of U.S. and German companies. Finally, the Japanese government seems to be committed to further increases in the amount of financial resources it channels to developing countries, whether bilaterally or through multilateral institutions.

The magnitudes of Japanese foreign assets and investment flows are such that even relative-

ly modest shifts can have significant impact on asset prices in international markets including, of course, exchange rates. Japanese investor sentiments can change much more rapidly and generate much larger movements of funds than shifts in the country's current account balance. Thus, at least in the short run, the behavior of Japanese investors could have more influence on the yen exchange rate than current account trends.

Investment flows out of Japan helped weaken the yen this year. For the time being, Japanese investors' desire to acquire additional net foreign assets seems more than adequate to deploy excess domestic savings at current yen exchange rates and interest differentials. However, this situation may not persist. At some point, the resolution of domestic political uncertainties that unnerved Japanese investors earlier this year, together with relatively favorable domestic economic fundamentals, could cause Japanese investor sentiment to shift toward domestic yen assets. When this occurs, some combination of a higher yen exchange rate and a widening of real interest rate differentials could result.

Statistical appendix

For key to data in tables see October 12 issue.

Effective exchange rates — industrial countries, 14

Real effective exchange rates — developing countries, 15

Central bank discount rates, 16

Day-to-day money rates, 16

Treasury bill rates, 17

Representative money market rates, 17

Commercial bank deposit rates, 18

Commercial bank lending rates to prime borrowers, 18

Domestic government bond yields, 19

Eurocurrency deposit rates, 19

Information herein is from sources considered to be reliable but is furnished without responsibility on the part of Morgan Guaranty Trust Company.

Chief economist, Rimmer de Vries, Senior Vice President
Editor, Norman R. Klath, Vice President
Authors of this issue, Richard P. Mattione, Vice President; Norman R. Klath, Vice President
Publications manager, Sorca E. McFadden, Vice President

Effective exchange rates — industrial countries

Index numbers, 1980-82 average=100.

	United States	Canada	Japan	Australia	France	Germany	Italy	United Kingdom	Austria	Belgium	Neth-erlands	Spain	Swit-zerland	Den-mark	Norway	Swe-den
Nominal against 15 other industrial-country currencies																
1984	122.3	97.3	112.9	94.2	84.4	107.3	86.7	88.1	103.6	88.9	103.9	77.4	110.5	93.9	97.8	84.3
1985	127.0	92.8	115.9	76.3	85.5	107.8	82.1	88.2	104.2	89.6	104.0	75.6	109.5	95.1	95.6	83.9
1986	106.0	87.6	150.1	61.4	87.4	116.1	82.9	80.7	107.8	92.9	110.3	73.4	118.1	99.7	89.2	81.6
1987	94.1	89.6	164.4	58.3	87.1	122.0	82.3	79.0	110.8	95.6	114.6	73.1	123.1	102.8	85.7	80.1
1988	88.0	95.6	181.6	61.9	85.7	121.8	79.8	83.8	110.2	94.6	114.4	75.6	121.9	101.2	85.6	80.3
1988																
November	86.6	96.2	187.6	66.3	85.0	121.8	79.6	84.7	110.2	94.2	114.1	76.1	120.9	100.3	84.3	80.4
December	86.2	98.0	186.7	67.1	84.6	121.4	80.0	85.6	110.0	94.2	113.6	77.1	119.9	100.3	85.0	80.4
1989																
January	88.1	99.0	183.7	69.4	84.1	120.3	79.9	85.9	109.6	93.7	112.8	79.0	117.7	98.5	85.8	80.8
February	88.5	99.3	183.8	68.6	84.0	120.2	79.9	85.4	109.5	93.6	112.8	79.0	117.7	98.0	86.0	80.7
March	89.7	99.1	181.1	66.2	84.6	120.4	79.7	84.3	109.5	93.7	112.9	79.2	116.2	98.0	86.0	80.8
April	89.9	99.8	179.4	65.4	84.9	120.6	79.9	83.9	109.9	93.9	112.9	79.6	113.8	98.2	86.2	81.2
May	92.6	100.1	174.7	64.7	84.5	120.0	80.2	83.0	109.7	93.6	112.8	78.6	112.3	97.7	86.2	81.5
June	94.7	100.1	168.8	64.7	84.3	120.1	80.7	80.2	109.6	93.8	113.1	76.9	116.0	98.0	86.1	81.7
July	92.0	100.2	170.1	63.1	84.7	120.8	81.2	81.1	109.8	94.2	113.5	78.9	116.8	98.9	85.7	81.3
August	92.5	101.6	170.0	64.2	84.7	120.2	81.5	80.5	109.6	93.9	113.2	78.7	116.3	98.5	85.8	81.5
September	93.8	101.2	166.3	65.8	84.7	120.2	81.3	80.1	109.4	93.9	113.1	78.6	115.9	98.4	85.8	81.7
October	91.8	101.5	167.6	64.9	85.5	122.0	80.6	78.7	110.5	94.5	114.2	78.6	116.1	99.6	85.6	81.3
September 15	94.9	101.1	164.9	66.3	84.6	119.7	81.3	80.0	109.4	93.7	112.9	78.6	115.7	98.1	85.8	81.9
22	93.8	101.2	165.8	66.1	84.7	120.2	81.2	80.3	109.6	93.9	113.2	78.8	115.8	98.4	85.9	81.7
29	91.8	101.2	169.1	65.5	85.0	121.1	81.2	80.3	109.2	94.1	113.6	78.4	116.3	98.9	85.8	81.5
October 6	91.9	101.4	168.8	65.2	85.2	121.3	80.5	80.0	110.2	94.2	113.8	78.3	116.5	99.0	85.7	81.5
13	92.9	101.8	166.6	65.5	85.4	121.6	80.5	78.2	110.4	94.3	114.0	78.4	115.5	99.2	85.7	81.6
20	91.6	101.4	167.9	64.4	85.6	122.3	80.5	78.3	110.7	94.7	114.5	78.6	116.1	99.9	85.5	81.1
27	91.3	101.4	167.3	64.5	85.7	122.3	80.8	78.5	110.7	94.8	115.5	78.6	116.2	100.1	85.5	81.1
November 3	91.6	101.5	166.1	65.5	85.9	122.5	80.9	77.3	110.8	95.0	114.7	79.3	116.2	100.4	85.4	81.1
Real against 15 other industrial-country currencies																
1984	119.7	100.1	97.5	106.5	97.0	98.0	101.8	90.2	103.0	85.9	97.8	91.0	100.1	99.2	100.8	95.9
1985	122.3	96.4	97.0	89.4	100.5	96.7	100.2	92.9	103.3	85.3	96.6	92.4	98.0	101.3	99.7	96.8
1986	102.4	93.6	115.4	79.6	103.5	103.4	102.9	87.4	106.8	84.8	101.3	94.2	106.0	107.8	97.7	96.3
1987	91.8	96.8	119.6	81.8	104.8	106.9	103.8	87.5	108.9	84.7	104.2	96.2	110.1	112.1	100.9	95.8
1988	87.4	104.7	125.9	91.1	102.2	106.2	104.2	94.4	107.6	81.5	100.7	100.8	107.1	112.0	102.1	99.3
1989																
May	92.9	108.0	119.9	96.1	98.9	103.3	108.7	94.6	105.9	81.6	97.5	105.7	97.4	108.8	102.3	104.9
June	94.9	107.7	116.5	95.8	98.7	103.3	109.9	91.5	106.4	81.5	97.3	103.6	100.4	108.9	102.6	105.2
July	92.2	107.6	117.4	93.9	99.5	103.7	110.9	93.0	108.5	82.2	95.8	107.1	100.7	109.8	101.1	104.8
August	92.7	108.9	117.1	95.7	99.4	103.1	112.0	92.4	108.3	81.9	95.8	106.9	100.1	109.7	100.7	105.5
September	93.8	108.1	114.7	98.3	99.2	102.8	112.4	92.2	106.6	81.7	96.2	106.2	99.8	109.9	101.8	106.9
October	91.8	108.1	115.6	97.2	100.1	104.2	112.2	90.7	107.0	82.3	96.5	106.2	100.3	111.5	101.1	106.9
Real against 18 other industrial-country and 22 LDC currencies																
1984	120.9	102.7	102.0	106.8	96.4	96.8	101.0	89.7	102.6	85.0	95.9	91.2	99.8	99.1	100.8	95.7
1985	123.8	99.1	102.0	90.0	100.0	95.8	99.8	92.4	102.9	84.5	94.8	93.1	97.8	101.3	100.1	96.8
1986	107.8	94.8	120.0	81.4	104.2	104.7	104.4	88.3	107.7	85.4	101.3	96.8	107.9	108.3	98.5	97.1
1987	97.8	97.0	123.3	83.3	106.1	109.3	106.5	89.3	110.6	85.9	105.3	99.8	113.1	113.1	102.0	97.1
1988	92.4	104.3	129.0	92.1	102.9	107.6	106.1	95.7	108.7	82.3	101.0	103.7	109.2	112.8	102.9	100.2
1989																
May	98.0	108.3	124.1	96.7	99.2	103.8	110.0	95.1	106.3	81.7	97.2	108.9	98.9	109.2	103.0	105.0
June	99.2	108.0	120.3	96.2	98.9	103.6	111.0	92.0	106.9	81.5	96.8	106.1	101.8	109.3	103.1	105.1
July	96.7	107.6	120.5	94.5	99.8	104.3	112.2	93.6	109.2	82.3	95.6	109.9	102.2	110.2	101.6	104.8
August	97.0	109.0	120.2	95.9	99.6	103.4	113.1	92.8	108.8	81.9	95.4	109.5	101.5	110.0	101.2	105.4
September	98.0	108.2	117.9	98.4	99.4	103.2	113.5	92.7	107.0	81.7	95.7	108.8	101.2	110.2	102.4	106.8
October	94.8	107.7	115.8	97.1	100.0	104.2	112.2	90.2	107.4	82.2	95.8	107.4	101.3	111.6	101.5	106.3

Real effective exchange rates — developing countries

Index numbers, 1980-82 average=100.

	Argentina	Brazil	Chile	Colombia	Mexico	Peru	Venezuela	Hong Kong	Indonesia	Korea	Malaysia	Philippines	Singapore	Taiwan	Israel	Turkey
1984	80.2	85.8	90.2	99.6	91.9	105.9	85.9	99.5	96.1	96.6	119.8	107.9	102.5	97.2	119.4	90.4
1985	71.2	85.0	79.6	85.5	90.5	96.8	93.0	103.5	94.6	89.3	116.2	114.5	95.6	94.6	106.6	89.7
1986	61.3	74.7	69.0	67.9	65.3	97.1	89.5	93.9	72.8	76.3	95.3	90.8	80.8	89.1	101.2	71.6
1987	53.9	74.2	65.7	63.6	67.1	108.4	65.0	89.9	56.1	75.6	89.4	87.6	74.5	94.6	97.7	63.6
1988	59.7	81.2	60.8	61.3	80.0	124.5	71.9	90.6	54.0	82.3	80.3	89.4	73.1	100.1	107.2	64.9
1988																
November	66.9	81.5	59.5	58.1	78.1	112.6	75.7	93.6	52.8	85.8	77.4	88.8	74.3	101.0	111.0	63.0
December	68.1	82.8	60.4	57.9	78.1	111.0	76.3	93.0	52.4	86.9	76.5	91.1	74.4	100.1	111.1	62.3
1989																
January	70.4	84.0	61.1	60.3	78.2	126.1	84.5	92.6	53.8	88.5	77.4	93.6	76.3	101.5	105.6	66.6
February	71.6	82.1	62.5	60.4	78.1	129.2	96.8	93.5	53.7	89.4	77.5	92.4	77.1	102.2	109.1	66.4
March	79.5	83.8	61.8	61.9	78.4	140.4	48.5	95.8	54.3	90.5	77.4	92.1	77.1	103.0	110.6	66.6
April	39.0	88.3	64.1	61.7	78.0	164.9	51.9	97.4	54.6	91.5	77.9	92.1	77.1	104.8	111.0	67.7
May	29.0	92.8	67.4	62.0	78.1	171.0	59.3	101.3	55.9	93.8	80.9	94.6	78.8	109.8	111.8	72.6
June	43.0	94.9	64.5	62.0	77.6	189.4	64.2	102.3	56.8	95.2	81.9	96.1	79.7	109.9	110.8	76.2
July	49.1	92.9	61.2	60.7	75.9	186.7	64.4	98.7	57.0	93.1	81.2	93.9	79.5	111.5	107.2	76.8
August	48.2	102.1	61.0	60.7	75.3	190.8	64.2	98.9	56.6	93.8	82.2	94.1	80.2	112.3	108.4	77.9
September	49.6	96.5	62.5	60.5	75.2	206.2	68.3	101.1	56.5	94.9	82.0	93.6	80.1	113.8	110.0	78.1
October	48.6	88.8	57.8	58.8	73.6	224.0	67.0	100.5	56.4	90.6	80.5	93.7	78.6	111.0	119.8	77.8

Weights in effective exchange rate calculations for selected currencies

based on 1980 trade in manufactures

	Indices for currency of									
	United States		Japan		Canada	Germany		France	Italy	United Kingdom
	Narrow	Broad	Narrow	Broad	Narrow	Narrow	Broad	Narrow	Narrow	Narrow
Percent weight on currency of										
United States	0.0	0.0	54.9	35.2	83.5	9.9	9.8	10.0	9.0	16.2
Japan	23.2	18.5	0.0	0.0	4.0	3.6	6.3	3.0	2.2	4.8
Canada	30.3	20.7	4.0	3.1	0.0	0.8	0.9	0.7	0.8	2.8
Australia	2.4	1.7	4.7	2.7	0.6	0.6	0.4	0.3	0.6	2.2
Europe	43.6	38.2	35.4	42.1	11.9	85.1	76.1	86.1	87.4	74.0
Germany	10.9	9.9	10.6	12.1	2.3	0.0	0.0	26.6	29.8	18.5
France	5.9	5.1	4.1	5.7	1.3	18.0	15.8	0.0	23.1	11.3
Italy	4.1	3.7	2.4	4.0	1.0	12.2	11.5	16.6	0.0	7.4
United Kingdom	9.2	8.2	6.7	7.2	3.7	8.9	10.0	9.1	8.8	0.0
Belgium	3.5	2.2	2.2	1.9	0.7	11.0	8.2	13.7	6.1	8.1
Netherlands	3.0	2.0	3.0	2.2	1.0	11.5	8.4	5.7	4.8	8.6
Scandinavia	2.9	2.4	2.1	2.7	0.9	7.5	6.4	3.7	8.5	8.9
Spain	1.4	1.3	1.1	1.3	0.3	2.1	2.1	4.5	3.1	2.2
Other	2.7	3.4	3.2	5.0	0.7	13.9	13.7	6.2	3.2	9.0
Brazil	—	2.2	—	1.4	—	—	0.9	—	—	—
Mexico	—	4.6	—	1.0	—	—	0.4	—	—	—
Hong Kong	—	2.0	—	0.8	—	—	0.8	—	—	—
Korea	—	2.1	—	2.3	—	—	0.6	—	—	—
Taiwan	—	3.1	—	1.4	—	—	0.6	—	—	—
Other countries	—	6.9	—	10.0	—	—	3.2	—	—	—

A currency's nominal effective exchange rate is an index of its trade-weighted average value against the currencies of the corresponding country's principal trade partners. The real effective exchange rate, which adjusts the nominal index for relative price changes, gauges the effect on the international price competitiveness of the country's manufactures due to currency changes and differential inflation.

The monthly and weekly exchange rates used are averages of daily spot rates. The relative price changes are based on indices most closely measuring the prices of domestically produced finished manufactured goods, excluding food and energy at the first stage of manufacturing.

The weights for the "narrow" indices (versus 15 industrial-country currencies) are proportional to the value of bilateral exports plus imports of manufactures in 1980. For the "broad" indices (versus 18 industrial-country and 22 LDC currencies), modified weights allow not only for competition between trade partners in each other's home markets but also for export competition in third markets.

The indices should be interpreted cautiously on three counts. First, the base period (1980-82 = 100) should not be assumed one of equilibrium in relation to purchasing power parity, the balance of payments, or other policy objectives. Second, available price indices are not fully comparable. Third, especially in LDCs, taxes and subsidies on exports, and tariffs, deposits, and special taxes on imports create *de facto* multiple exchange rate systems.

Central bank discount rates

at or near end of month

	1987	1988	1989							Current	
	Dec	Dec	Apr	May	Jun	Jul	Aug	Sep	Oct	1989	effective since
United States	6.00	6.50	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	Feb 24, 89
Canada	8.66	11.19	11.62	12.40	12.33	12.36	12.41	12.48	12.42	12.42	Oct 26, 89
Austria	3.00	4.00	5.00	5.00	5.50	5.50	5.50	5.50	6.50	6.50	Oct 6, 89
Belgium	7.00	7.75	8.75	8.75	9.25	9.25	9.25	9.25	10.25	10.25	Oct 5, 89
Denmark	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	Oct 27, 83
Finland	7.00	8.00	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	Jan 1, 89
France	7.75	7.75	8.25	8.25	8.25	8.75	8.75	8.75	9.50	9.50	Oct 5, 89
Germany	2.50	3.50	4.50	4.50	5.00	5.00	5.00	5.00	6.00	6.00	Oct 5, 89
Ireland	9.25	8.00	9.00	9.00	10.00	10.00	10.00	10.00	11.00	11.00	Oct 5, 89
Italy	12.00	12.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	Mar 3, 89
Netherlands	3.75	4.50	5.50	5.50	6.00	6.00	6.00	6.00	7.00	7.00	Oct 5, 89
Portugal	14.50	13.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	Mar 21, 89
Spain	13.50	12.40	13.75	13.75	13.75	14.50	14.50	14.50	14.50	14.50	July 7, 89
Sweden	7.50	8.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	Apr 25, 89
Switzerland	2.50	3.50	4.50	4.50	5.50	5.50	5.50	5.50	6.00	6.00	Oct 5, 89
United Kingdom	8.37	12.81	12.81	13.75	13.75	13.75	13.75	13.75	14.75	14.75	Oct 5, 89
Japan	2.50	2.50	2.50	3.25	3.25	3.25	3.25	3.25	3.75	3.75	Oct 11, 89
Australia	12.50	15.00	16.60	17.60	17.60	17.60	17.60	17.60	18.00	18.00	Oct 26, 89
New Zealand	18.55	15.10	15.10	14.60	14.60	14.70	14.70	15.15	14.90	14.90	Oct 31, 89
Argentina*	17.59	15.43	171.66	256.00	222.00	370.00	15.83	10.71	10.80	10.80	Sep, 89
Korea	7.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	Sep, 88
Singapore	5.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	Aug, 88
Venezuela	8.00	8.00	30.00	32.00	37.0	37.00	34.00	34.00	34.00	34.00	Aug, 89

*Percent per month.

Day-to-day money rates

monthly averages

	1987	1988	1989								
	Dec	Dec	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
United States	6.66	7.57	9.36	9.85	9.84	9.81	9.53	9.24	8.99	9.02	8.84
Canada	8.07	9.20	11.22	11.10	12.28	12.33	12.28	12.25	12.28	12.06	12.25
Austria	4.15	4.54	6.30	6.20	6.80	5.84	7.35	6.50	6.50	8.20	n.a.
Belgium	5.63	5.03	5.69	7.02	6.68	6.11	6.86	6.76	7.49	7.29	8.09
Finland	9.19	8.45	7.91	9.09	11.37	11.43	9.79	10.56	8.86	8.56	n.a.
France	7.71	7.53	8.70	8.45	8.31	8.51	8.93	9.19	9.05	8.94	9.85
Germany	3.72	4.01	5.94	5.61	5.85	6.32	6.47	6.91	6.76	6.91	7.80
Ireland	10.46	7.56	7.50	7.75	8.13	7.25	9.00	9.75	10.00	9.13	11.25
Italy	10.96	10.77	12.25	13.07	12.83	12.56	12.58	12.63	12.65	12.67	n.a.
Netherlands	5.11	4.50	6.10	6.25	6.52	6.80	6.78	7.00	7.20	7.26	7.97
Norway	13.86	13.31	11.45	11.47	11.40	11.07	10.70	11.10	10.60	n.a.	n.a.
Portugal	13.68	12.34	12.36	12.43	12.58	14.60	12.92	12.48	12.34	12.42	n.a.
Spain	15.83	11.29	13.47	13.89	13.91	13.97	14.42	15.11	15.10	14.98	14.83
Sweden	9.15	10.08	10.76	10.43	11.16	11.73	11.81	12.15	12.08	11.90	11.90
Switzerland	1.37	2.48	5.25	5.50	6.50	7.25	7.25	7.25	7.00	7.50	n.a.
United Kingdom	8.94	10.06	13.03	12.85	11.94	13.09	13.74	14.06	14.01	14.00	14.93
Australia	13.04	11.90	15.24	16.24	16.49	16.93	16.95	16.81	16.92	17.45	n.a.
Japan	3.51	3.62	3.89	4.01	4.05	4.19	4.85	5.04	5.22	5.28	5.81
Argentina*	9.59	16.06	19.50	21.38	46.68	112.77	106.60	15.00	12.69	7.40	6.15
Brazil*	13.47	22.75	18.95	20.42	11.53	11.40	27.29	33.19	35.49	38.61	47.66
Hong Kong	3.78	5.66	9.64	10.53	10.62	10.65	10.70	9.75	8.89	9.40	7.81
Singapore	3.09	3.87	5.05	4.64	4.90	5.28	5.06	4.99	5.09	5.25	5.35
Taiwan	3.90	4.70	4.42	3.64	10.85	11.21	7.95	n.a.	n.a.	n.a.	n.a.

*Percent per month.

Treasury bill rates

bond equivalent yields, at or near end of month

	1987	1988	1989								
	Dec	Dec	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
United States	5.84	8.38	9.03	9.24	8.71	8.96	8.31	8.06	8.11	8.21	7.94
Canada	8.41	10.94	11.61	12.14	12.37	12.15	12.08	12.11	12.16	12.23	12.17
Belgium	6.84	7.60	8.52	8.31	8.42	8.77	8.62	8.62	8.57	9.19	9.78
Ireland	8.69	8.17	8.22	8.12	8.87	9.42	9.13	9.74	10.18	9.14	11.34
Italy	11.66	11.44	11.50	12.99	12.70	12.25	10.84	12.48	12.95	12.99	n.a.
Netherlands	4.95	4.00	6.75	6.50	6.75	7.00	7.00	7.19	7.31	7.44	8.25
Spain	6.67	12.37	12.93	12.87	12.63	13.38	n.t.	n.t.	13.70	n.t.	n.t.
Sweden	9.05	10.40	11.40	11.60	11.61	11.63	11.81	n.a.	11.65	11.71	11.85
United Kingdom	8.38	12.91	12.91	12.79	12.62	13.72	14.10	13.69	13.81	14.41	14.98
Australia	10.06	14.97	16.27	15.64	16.17	17.29	17.17	16.76	16.96	17.46	17.91
Japan	2.38	2.38	2.38	2.38	2.38	2.38	3.14	3.14	3.14	3.14	3.14
Mexico	133.04	51.26	49.24	49.61	51.69	54.99	54.99	36.42	35.67	36.35	39.14
Philippines	13.35	17.51	15.63	15.67	16.26	16.80	17.45	17.43	20.80	23.25	23.58
Singapore	3.23	3.80	3.63	3.82	3.91	4.08	4.01	3.93	4.03	4.31	4.26

Representative money market rates

bond-equivalent yields on major short-term (mostly 3-4 month) money market instruments other than Treasury bills, at or near end of month

	1987	1988	1989								
	Dec	Dec	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
United States	7.21	9.39	10.29	10.39	10.03	9.71	9.45	8.65	9.00	9.15	8.78
Canada	8.90	11.10	12.20	12.40	12.63	12.45	12.30	12.27	12.30	12.36	12.30
Belgium	6.95	7.65	8.62	8.42	8.42	8.82	8.62	8.62	8.57	8.87	9.78
Finland	9.24	11.74	10.96	12.45	11.76	12.33	11.29	11.90	12.51	13.66	14.25
France	8.63	8.63	9.63	8.94	8.81	9.13	9.44	9.00	9.19	9.69	10.35
Germany	3.65	5.50	7.00	6.55	6.60	7.35	7.20	6.90	7.20	7.85	8.25
Ireland	8.81	8.50	8.38	8.25	9.25	9.44	10.50	10.06	10.63	10.69	11.94
Italy	11.50	11.75	12.50	12.50	10.50	11.00	12.38	12.50	12.50	12.63	n.a.
Netherlands	4.56	5.88	7.31	6.75	6.91	7.06	7.38	7.13	7.44	8.00	8.38
Portugal	14.34	13.42	12.97	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Spain	13.59	13.65	14.56	15.13	14.78	14.77	14.90	15.53	15.31	15.06	14.96
Switzerland	3.56	4.94	6.06	5.88	6.69	8.19	7.25	7.13	7.38	7.88	n.a.
United Kingdom	9.00	13.19	13.44	13.06	13.02	14.28	14.22	13.88	14.00	14.88	15.38
Australia	11.25	15.35	16.82	17.62	17.19	18.17	18.15	18.10	17.90	18.45	18.37
Japan	3.90	4.17	4.21	4.20	4.21	4.33	4.59	4.85	4.91	4.96	5.59
New Zealand	17.70	14.18	13.64	13.32	13.46	13.42	13.59	13.21	13.23	13.66	13.95
Chile	15.25	26.82	14.84	9.60	22.20	19.20	25.90	27.60	28.10	21.60	30.45
Hong Kong	1.50	9.25	10.44	11.00	10.94	10.60	10.06	9.00	9.13	9.25	8.31
Korea	7.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	n.a.	n.a.
Singapore	3.25	5.63	5.69	5.38	5.50	5.63	5.69	5.44	5.44	n.a.	n.a.
Taiwan	3.09	4.72	4.92	4.69	9.03	11.10	9.30	n.a.	n.a.	n.a.	n.a.
Venezuela	11.50	13.90	23.00	27.00	31.00	31.00	39.00	39.00	34.00	34.00	33.00

Commercial bank deposit rates

at or near end of month

	1987	1988	1989								
	Dec	Dec	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct
United States	7.10	9.18	10.04	10.12	9.75	9.44	9.08	8.41	8.76	8.96	8.51
Canada	8.40	11.01	11.60	11.71	12.50	12.35	12.12	12.17	12.27	12.26	12.26
Austria	4.25	5.65	6.75	6.60	6.75	6.97	7.30	7.55	7.20	8.10	n.a.
Belgium	6.69	7.38	8.44	8.06	8.19	8.63	8.50	8.50	8.44	9.20	9.63
Denmark	6.00	5.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	n.a.
Finland	10.12	11.68	10.82	12.28	11.77	11.74	11.74	11.89	12.32	12.32	14.18
France	8.63	8.38	8.93	8.63	8.56	8.72	9.06	8.94	8.81	9.32	9.95
Germany	3.50	5.05	6.25	6.15	6.15	6.90	6.75	6.56	6.82	n.a.	7.80
Ireland	8.62	8.13	8.13	8.13	9.13	9.25	9.38	9.88	10.50	10.63	11.81
Italy	9.81	8.40	5.80	4.85	5.90	9.60	9.80	11.90	11.90	n.a.	n.a.
Netherlands	4.50	5.75	7.19	6.69	7.06	7.44	7.25	7.06	7.31	7.88	8.25
Portugal	14.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	n.a.	n.a.
Spain	9.48	8.97	9.36	9.19	9.35	9.46	9.54	9.47	9.53	9.65	n.a.
Sweden	9.45	11.05	11.50	12.00	11.90	11.80	11.95	n.a.	11.80	11.90	12.10
Switzerland	3.37	4.69	5.81	5.63	6.44	7.94	7.00	6.88	7.13	7.63	n.a.
United Kingdom	8.81	12.94	13.13	12.88	12.75	14.13	13.88	13.75	13.88	14.13	15.13
Australia	11.47	13.85	15.25	16.25	16.00	17.00	17.50	17.50	17.50	16.50	n.a.
Japan	4.36	4.47	4.67	4.56	4.68	5.12	5.40	5.43	5.49	5.67	6.50
New Zealand	16.85	14.27	13.57	13.39	13.55	13.49	13.64	13.30	13.15	13.63	13.79
*Argentina**	14.00	11.57	18.57	20.00	50.00	81.11	65.90	14.71	9.49	5.67	5.92
Brazil	517.36	1442.73	679.21	636.21	399.47	446.30	1547.56	2969.05	3218.77	3355.00	8845.00
Chile	14.84	24.60	12.28	20.40	23.20	19.80	26.70	28.50	28.90	21.60	29.80
Hong Kong	1.50	9.25	10.44	11.00	10.94	10.60	10.06	9.00	9.13	9.25	8.31
Korea	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Mexico	120.35	31.75	29.90	29.90	29.90	29.90	29.90	29.63	28.96	29.10	31.36
Singapore	3.13	5.31	5.38	5.25	5.31	5.31	5.31	5.25	5.25	n.a.	n.a.
Taiwan	5.25	5.25	5.25	5.25	5.25	5.25	5.25	n.a.	n.a.	n.a.	n.a.
Venezuela	8.95	8.97	20.83	25.30	30.00	32.00	35.00	41.00	39.00	35.00	32.00

Commercial bank lending rates to prime borrowers

at or near end of month

	1987	1988	1989								
	Dec	Dec	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
United States	8.75	10.50	11.50	11.50	11.50	11.50	11.00	10.50	10.50	10.50	10.50
Canada	9.75	12.25	12.75	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50
Austria	8.25	8.75	8.75	9.25	9.25	9.25	9.75	9.75	9.75	9.75	n.a.
Belgium	8.75	9.75	10.25	10.75	10.75	10.75	10.75	10.75	10.75	11.25	12.25
Denmark	9.50	9.25	8.50	8.50	9.50	9.50	9.50	10.00	10.00	10.00	n.a.
Finland	8.99	10.25	9.92	9.94	10.06	10.13	10.18	10.18	10.20	10.31	n.a.
France	9.60	9.25	9.60	9.60	9.60	9.60	10.00	10.00	10.00	10.00	10.50
Germany	6.25	6.00	6.50	7.00	7.00	7.50	7.50	8.50	8.50	8.50	9.50
Ireland	11.50	10.75	10.75	10.75	10.75	11.75	11.75	12.75	12.75	12.75	13.75
Italy	13.00	12.88	13.00	13.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Netherlands	4.87	6.00	7.13	6.75	7.00	7.25	7.50	7.50	7.50	8.06	8.38
Portugal	18.50	n.a.	18.67	19.08	19.38	19.65	19.83	19.88	19.88	20.15	20.27
Spain	16.34	13.20	13.69	13.90	13.87	13.91	13.93	14.27	14.37	13.74	13.81
Sweden	11.50	12.00	12.00	12.00	12.00	12.50	12.50	12.50	12.50	12.50	12.50
Switzerland	5.00	5.50	6.25	6.25	6.25	6.25	7.50	7.50	8.25	8.25	n.a.
United Kingdom	8.50	13.00	13.00	13.00	13.00	14.00	14.00	14.00	14.00	14.00	15.00
Australia	14.00	16.50	18.00	18.50	18.75	19.75	19.75	20.25	20.25	20.25	20.25
Japan	3.38	3.38	4.25	4.25	4.25	4.25	4.25	4.88	4.88	4.88	4.88
New Zealand	19.30	16.30	15.75	15.75	15.75	15.75	15.75	15.75	15.75	15.75	15.75
*Argentina**	14.80	12.50	19.50	27.00	142.94	220.00	110.00	210.00	16.00	7.80	7.80
Chile	30.99	44.41	29.38	26.40	29.90	25.80	30.80	31.80	32.20	25.90	32.88
Hong Kong	5.50	10.00	10.50	11.50	11.50	11.00	11.00	10.00	10.00	10.00	10.00
Korea	10.00	10.00	10.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
Singapore	6.10	6.13	6.15	6.18	6.19	6.23	6.23	6.23	6.23	6.23	6.23
Taiwan	9.00	9.00	9.00	9.00	12.00	12.00	12.00	n.a.	n.a.	n.a.	n.a.
Venezuela	13.00	12.76	12.75	27.60	37.39	37.50	42.00	42.50	39.72	36.50	30.20

*Percent per month.

Domestic government bond yields

long-term issues, at or near end of month

	1987	1988	1989								
	Dec	Dec	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
United States	8.95	9.00	9.14	9.11	8.91	8.60	8.05	7.92	8.21	8.31	7.92
Canada	10.02	10.19	10.54	10.48	10.12	9.70	9.31	9.15	9.52	9.74	9.45
Austria	6.89	6.54	6.73	6.90	6.95	7.13	7.17	7.14	7.14	7.17	n.a.
Belgium	8.04	8.05	8.45	8.48	8.29	8.37	8.45	8.37	8.41	8.70	8.90
Denmark	12.05	9.39	9.93	9.74	9.73	10.12	9.76	9.19	9.74	9.96	n.a.
Finland	7.67	7.22	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
France	9.99	8.53	9.26	8.99	8.72	8.76	8.70	8.45	8.46	8.87	8.99
Germany	6.54	6.62	7.08	7.04	6.96	7.16	6.93	6.78	6.98	7.18	n.a.
Ireland	10.45	8.41	8.79	8.77	8.89	9.31	8.96	8.53	8.93	8.94	9.16
Italy	10.50	10.70	10.89	11.54	11.52	11.59	11.44	11.63	11.61	11.84	n.a.
Netherlands	6.32	6.43	7.17	7.14	7.30	7.47	7.14	6.97	7.31	7.75	8.25
Norway	13.29	11.70	10.78	10.83	10.68	10.66	10.85	10.83	n.a.	n.a.	n.a.
Portugal	14.82	13.95	13.53	14.30	14.23	14.53	15.17	15.47	15.96	n.a.	n.a.
Spain	13.44	12.82	13.20	13.57	13.51	13.62	13.79	13.80	13.70	14.38	14.37
Sweden	11.39	10.87	10.94	11.14	11.08	11.03	11.34	n.a.	11.17	11.24	11.64
Switzerland	3.95	4.11	4.79	4.88	5.11	5.36	5.12	5.18	5.28	5.40	n.a.
United Kingdom	9.51	9.45	9.29	9.26	9.51	9.79	9.74	9.32	9.47	9.81	9.86
Australia	12.85	12.95	13.65	13.65	13.40	13.90	13.50	13.35	12.95	13.67	13.55
Japan	5.07	4.69	4.97	5.09	5.30	5.23	5.37	4.84	4.92	5.06	5.35
New Zealand	14.30	13.60	13.27	13.21	13.38	13.16	13.03	12.63	12.07	12.45	n.a.

Eurocurrency deposit rates

prime banks' bid rates, at or near end of month

	1987	1988	1989								
	Dec	Dec	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Eurodollar											
overnight	6.75	9.00	9.63	9.88	9.56	10.75	9.75	8.56	8.69	9.00	8.75
one month	7.06	9.06	10.00	9.94	9.75	9.63	9.31	8.56	8.88	9.00	8.63
three months	7.37	9.19	10.19	10.19	9.88	9.50	9.19	8.44	8.88	9.06	8.56
six months	7.50	9.31	10.38	10.56	9.94	9.38	8.94	8.25	8.88	9.00	8.38
twelve months	7.81	9.50	10.63	10.94	10.00	9.38	8.81	8.13	8.81	9.00	8.31
Euro-French franc											
one month	8.75	8.56	9.44	8.44	8.56	8.88	9.25	8.94	9.00	9.31	10.19
three months	9.00	8.63	9.69	8.75	8.75	9.00	9.31	8.88	9.06	9.44	10.13
six months	9.25	8.63	9.75	8.94	8.81	9.06	9.31	8.88	9.06	9.44	10.06
twelve months	9.25	8.75	9.94	9.13	8.94	9.19	9.31	8.88	9.06	9.44	9.94
Euromark											
one month	3.25	5.25	6.75	6.06	6.19	6.88	6.94	6.81	7.00	7.63	7.94
three months	3.37	5.31	6.94	6.31	6.38	7.13	6.94	6.81	7.13	7.88	8.13
six months	3.50	5.50	7.06	6.69	6.63	7.31	7.13	6.75	7.25	7.88	8.13
twelve months	3.75	5.56	7.13	6.88	6.81	7.38	7.19	6.63	7.25	7.81	8.00
Euro-Swiss franc											
one month	2.50	4.63	5.81	5.56	6.63	8.31	7.38	7.00	7.31	7.63	7.69
three months	3.00	4.69	6.00	5.75	6.63	8.13	7.38	7.00	7.31	7.81	7.81
six months	3.19	4.81	6.13	6.00	6.63	7.81	7.25	6.75	7.25	7.81	7.81
twelve months	3.25	4.81	6.19	6.06	6.56	7.69	7.13	6.63	7.19	7.75	7.69
Eurosterling											
one month	8.56	12.88	13.13	12.81	12.63	14.19	13.94	13.81	13.94	14.50	15.19
three months	8.81	13.06	13.31	13.00	12.88	14.31	14.13	13.81	13.94	14.56	15.25
six months	9.00	13.06	13.31	13.00	12.94	14.25	14.19	13.63	13.88	14.56	15.13
twelve months	9.31	12.81	13.19	12.88	12.88	14.06	14.06	13.25	13.50	14.38	14.56
Euroyen											
one month	4.00	4.44	4.69	4.31	4.44	4.94	5.25	5.13	5.50	5.50	6.19
three months	4.12	4.56	4.63	4.50	4.69	5.06	5.38	5.25	5.44	5.56	6.38
six months	4.12	4.50	4.69	4.63	4.88	5.13	5.44	5.25	5.38	5.56	6.38
twelve months	4.12	4.63	4.88	4.88	5.00	5.19	5.44	5.25	5.38	5.56	6.38
European currency unit											
one month	6.62	7.94	8.63	8.25	8.25	8.81	9.31	9.13	9.38	10.13	10.69
three months	6.75	8.00	9.06	8.63	8.50	9.13	9.38	9.13	9.56	10.31	10.69
six months	6.87	8.13	9.25	9.00	8.75	9.38	9.69	9.13	9.63	10.31	10.69
twelve months	7.00	8.13	9.50	9.19	9.06	9.50	9.75	9.13	9.50	10.31	10.56

World Financial Markets

Published by
Morgan Guaranty Trust Company of New York,
a subsidiary of J.P. Morgan & Co. Incorporated
Economic Research
23 Wall Street, New York NY 10015

Member, Federal Deposit Insurance Corporation. Printed in U.S.A.